

**National Health and Nutrition
Examination Survey 2003-2004**

**Documentation, Codebook,
and Frequencies**

Prescription Medication

Questionnaire

**Survey Years:
2003 to 2004**

**SAS Transport File:
RXQ_RX_C.XPT**



August 2007

NHANES 2003–2004 Data Documentation

Questionnaire Section: Prescription Medication (RXQ_RX_C)

First Published: August 2007

Last Revised: NA

Component Description	<p>The Dietary Supplements and Prescription Medication Section (DSQ) of the Sample Person (SP) Questionnaire collects information on 1) dietary supplement, 2) nonprescription antacids, 3) pain relievers, and 4) prescription medications.</p> <p>The Prescription Medication subsection provides personal interview data on use of prescription medications during a one-month period prior to the survey date. The NHANES 2003-2004 prescription medication questions are similar to the NHANES 1999-2002 and NHANES III, 1988-1994 questions.</p>
Eligible Sample	<p>All survey participants are eligible for the prescription medication questions. Participants over 16 years of age answer for themselves; proxy respondents answer for participants 16 years of age or younger and for individuals who could not self-report.</p>
Interview Setting and Mode of Administration	<p>In-person, home interview</p>
Changes Since Last Release	<p>Drugs are linked to a different drug coding system than in previous data releases. Also, drugs are linked to a new therapeutic classification system that is found in a separate data release file, RXQ_DRUG. For further details refer to the Data Editing section, <i>Drug Database for Data Release</i>.</p>
Data Processing and Editing	<p><u>Data Collection Methods</u></p> <p>During the household interview survey participants are asked if they have taken a medication in the past month for which they needed a prescription. Those who answer “yes” are asked to show the interviewer the medication containers of all the products used. For each medication reported, the interviewer enters the product’s complete name from the container into a computer. If no container is available, the interviewer asks the participant to verbally report the name of the medication.</p>

When the interviewer enters the medication name into the computer, the name is automatically matched to a prescription drug database on the computer to identify an exact match or similar text matches (refer below for details on the prescription medication database). The interviewer then selects the best match from a list of possible matches. The original entry of the interviewer and the product selected from the computer list are saved under separate variables for quality control purposes. If an exact match of the medication cannot be found, the interviewer is instructed to select “drug not found on list” from the list. Interviewers can record up to 20 prescription medications.

Participants are also asked how long they had been taking the medication and the main reason for use.

The NHANES 2003-2004 prescription medication questions can be accessed in the Dietary Supplements and Prescription Medications Section of the Sample Person Questionnaire.

Prescription Medication Questions Included in this Data Release

- Was any prescription medication taken in the past month
- Medication name
- Was medication container seen by interviewer
- How long was medication taken
- Number of prescription medications taken

Prescription Medication Database for Data Collection

NCHS used the Master Drug Database (MDDB[®]), a proprietary database of Facts and Comparison (Indianapolis, Indiana), to assist in data collection. MDDB is a comprehensive database of all prescription and some nonprescription drug products available in the U.S. drug market. For NHANES, the MDDB files were modified and uploaded to a laptop computer and incorporated into a search engine for use by interviewers in the field. The computer file is updated at the beginning of each survey year to incorporate changes to the MDDB and include products approved and available to the U.S. public in the prior year.

Data Editing

General editing of data:

If changes were made to the original data, a derived variable was created. The derived variable is essentially the final version of the variable after editing and recoding was performed. The derived variable includes the letter “D” in the third position of the variable name in place

of the letter “Q” for the questionnaire item that is customarily used in NHANES data release files. Variables that were obtained or derived from an external drug database will also have the letter “D” in the third position of the variable name.

Prescription medications incorrectly reported in subsections of questionnaire:

Prescription antacids that were incorrectly reported in the nonprescription antacid section of the questionnaire were removed from the antacid file and added to the prescription medication file.

Prescription supplements are released in the Dietary Supplements Data File. Some prescription medications were mistakenly recorded in the dietary supplement section. These were removed from that file and added to the prescription medication file. Any prescription dietary supplement that was incorrectly reported in the prescription medication section was removed from the prescription medication section and moved to the dietary supplement section. The following products were moved to the dietary supplements files:

- All calcium products except calcium acetate
- All fluoride products except those in topical gel or cream forms (e.g., stannous fluoride)
- Over-the-counter niacin, niacinamide, and nicotinic acid.

All prescription niacin, potassium, and sodium products were retained in the prescription medication file.

Products reported in the prescription medication section that were only available as an **over-the-counter product** during 2003-2004 were removed from the prescription medication file.

Prescription pain relievers used in the past 30 days that were reported in the Analgesic Sub-section of the Household Questionnaire were copied to the prescription medication file. As a result, the prescription drug file is comprehensive for all prescription drugs except prescription dietary supplements. All pain relievers copied to the prescription drug file were also retained with in the Analgesic Data Release File so that the Analgesic File is comprehensive for all pain relievers reported in that section.

The variables that record overall prescription drug use (RXDUSE) and number of prescription drugs taken (RXDCOUNT) were adjusted for products moved into or out of the prescription medication file.

Specific variables and edits:

RXDUSE: Have you taken or used any prescription medicines in the past month?

This variable was the lead-in question to the series of questions on prescription medication use. It accounts for all prescription medications except prescription dietary supplements that are included in the dietary supplements file (DSQ). A small number of persons refused to answer this question (coded 7) or did not know whether they used a prescription medication in the past month (coded 9). This variable was edited and takes into account prescription medications reported in this section as well as prescription medications moved in from the dietary supplements, nonprescription antacid, or pain reliever sections of the questionnaire. RXDUSE is equal to RXD030 which is found in the 99-00 and 01-02 Prescription Drug Files.

RXDCOUNT: The number of prescription medicines taken

This variable was computed at NCHS and represents the total number of prescription medications reported by the respondent including those drugs identified as unknown (RXDDRUG = 55555). The count has been adjusted for all prescription medications moved into and those moved out of the prescription medication section. However, the count is not a comprehensive count of all prescription medications used by a participant because prescription dietary supplements are part of the dietary supplements section. There were also participants who reported the use of a prescription medication in the past month (RXDUSE = 1) but did not know the name of the medication (RXDDRUG = 99999) or refused to report the name of the medication (RXDDRUG = 77777). Each product reported as refused or don't know is still included in the total count of prescription medications used under RXDCOUNT. RXDCOUNT is equal to RXD295 which is found in the 99-00 and 01-02 Prescription Drug Files.

RXQSEEN: Medicine container seen by interviewer?

This variable is equal to RXQ250 which is found in the 99-00 and 01-02 Prescription Drug Files. There was no editing of this variable.

RXDDAYS: For how long have you been taking this medicine?

This variable was created from a two-part (number and unit) question and indicates how long the respondent reported taking each prescription medication. Responses were recorded in days, weeks, months, and years. To facilitate analysis, all answers were converted to days using

conversion factors of 7 days per week, 30.4 days per month, and 365 days per year. There were persons who reported the use of a prescription medication but did not know how long they had been using the medication (RXDDAYS = 99999) or refused to report the length of use (RXDDAYS = 77777). There were also persons who reported the use of a prescription medication but did not report the length of use. RXDDAYS is missing for these persons. RXDDAYS is equal to RXD260 which is found in the 99-00 and 01-02 Prescription Drug Files.

Drug Database for Data Release:

NCHS used the Lexicon Plus[®], a proprietary database of Cerner Multum, Inc. to assist with data editing and release. Similar to MDDDB which was used for data collection, the Lexicon Plus is a comprehensive database of all prescription and some nonprescription drug products available in the U.S. drug market. For additional information refer to the RXQ_DRUG documentation.

In accordance with the license agreement, NCHS publications, tabulations, and software applications should cite the Multum Lexicon as the source and basis for the coding and classification of the NHANES drug data.

Creation of additional data release variables:

RXDDRUG: Generic drug name

All reported drug names were converted to a standard generic drug name for data release. For multi-ingredient products, the ingredients are listed in alphabetical order (i.e., Acetaminophen; Codeine).

There were participants who reported the use of a prescription medication but did not know the name of the drug or refused to report the name. These entries were coded as don't know (99999) and refused (77777), respectively. There were also medications reported with insufficient detail to accurately identify the exact product but there was some information about the therapeutic class of the drug. These products have been released with Multum's therapeutic category name followed by "- unspecified" (e.g., anti-infective-unspecified, hormones-unspecified). The names of a limited number of reported drugs could not be identified by NCHS as a known prescription product. These entries are counted as prescription medications, since there is no evidence that they are not, and have been coded as 55555, unknown drug.

RXDDRUG and the variable RXD240B, which is found in the 99-00 and 01-02 Prescription Drug Files, both record the generic drug name of the

reported product. However, since two different drug databases were used for editing across the different data release cycles, there are some differences in the way the drug names appear.

RXDDRGID: Generic drug code

Each generic drug name is associated with a unique generic drug code from Multum's Lexicon Drug Database. There were some drug names reported by NHANES' participants that were not found in the Lexicon Drug Database. These have been assigned unique drug codes beginning with an "a" or "h". Unspecified products with known therapeutic action have drug codes beginning with a "c" and are followed by their respective Multum therapeutic category code. RXDDRGID is missing for unknown drugs (55555), refused (77777), or don't know (99999) RXDDRUG entries.

Therapeutic class codes associated with a drug are found in a separate data release file, RXQ_DRUG.

RXDDRGID is not equal to the variable NHCODE which is found in the 99-00 and 01-02 Prescription Drug Files.

Quality Assurance & Quality Control

Data were routinely examined for discrepancies and erroneous entries. All drug names entered by the interviewer were compared to the medication name selected from the database. Review of the 2003-2004 data found that 70% of all reported drugs were automatically matched to the data collection drug database. Of these, less than 1% were incorrectly selected by the interviewer and required correction. The 30% that were not matched to the drug database were edited after data collection at NCHS. The most common reasons for a non-match were incorrect spelling of the drug, insufficient detail to identify drug, and reporting of a nonprescription product that was not in the drug database. Details of the editing process are described above.

Data File Structure

There are two files related to the prescription drug data. The contents of each file are described below. The files can be linked by RXDDRGID.

The file named RXQ_RX_C contains data on all survey participants and their use of a prescription drug. Participants who reported the use of multiple prescription drugs will have multiple records, that is, a record for each drug.

The file named RXQ_DRUG contains therapeutic drug class information on all drugs reported during 2003-2004. It contains drug (up to 4) and

ingredient (up to 6) therapeutic category codes for each drug. It also has a variable that identifies if the drug is made up of a single or multiple ingredients.

RXQ_RX_C: Participant's Use of Prescription Drug(s)	
Variable Name	Label
SEQN	RESPONDENT SEQUENCE NUMBER
RXDUSE	TAKEN PRESCRIPTION MEDICINE, PAST MONTH
RXDDRUG	GENERIC DRUG NAME
RXDDRGID	GENERIC DRUG CODE
RXDCCOUNT	NUMBER OF PRESCRIPTION MEDICINES TAKEN
RXQSEEN	MEDICINE CONTAINER SEEN BY INTERVIEWER
RXDDAYS	NUMBER OF DAYS TAKEN MEDICINE

RXQ_DRUG: Drug Information	
Variable Name	Label
RXDDRGID	GENERIC DRUG CODE
RXDDRUG	GENERIC DRUG NAME
RXDINGFL	SINGLE/MULTIPLE INGREDIENT DRUG
RXDDC1A	DRUG CATEGORY ID - CATEGORY 1, LEVEL 1
RXDDC1B	DRUG CATEGORY ID - CATEGORY 1, LEVEL 2
RXDDC1C	DRUG CATEGORY ID - CATEGORY 1, LEVEL 3
RXDDC2A	DRUG CATEGORY ID - CATEGORY 2, LEVEL 1
RXDDC2B	DRUG CATEGORY ID - CATEGORY 2, LEVEL 2
RXDDC2C	DRUG CATEGORY ID - CATEGORY 2, LEVEL 3
RXDDC3A	DRUG CATEGORY ID - CATEGORY 3, LEVEL 1
RXDDC3B	DRUG CATEGORY ID - CATEGORY 3, LEVEL 2
RXDDC3C	DRUG CATEGORY ID - CATEGORY 3, LEVEL 3
RXDDC4A	DRUG CATEGORY ID - CATEGORY 4, LEVEL 1
RXDDC4B	DRUG CATEGORY ID - CATEGORY 4, LEVEL 2
RXDDC4C	DRUG CATEGORY ID - CATEGORY 4, LEVEL 3
RXDDCN1A	DRUG CATEGORY NAME - CATEGORY 1, LEVEL 1
RXDDCN1B	DRUG CATEGORY NAME - CATEGORY 1, LEVEL 2
RXDDCN1C	DRUG CATEGORY NAME - CATEGORY 1, LEVEL 3
RXDDCN2A	DRUG CATEGORY NAME - CATEGORY 2, LEVEL 1
RXDDCN2B	DRUG CATEGORY NAME - CATEGORY 2, LEVEL 2
RXDDCN2C	DRUG CATEGORY NAME - CATEGORY 2, LEVEL 3
RXDDCN3A	DRUG CATEGORY NAME - CATEGORY 3, LEVEL 1
RXDDCN3B	DRUG CATEGORY NAME - CATEGORY 3, LEVEL 2
RXDDCN3C	DRUG CATEGORY NAME - CATEGORY 3, LEVEL 3
RXDDCN4A	DRUG CATEGORY NAME - CATEGORY 4, LEVEL 1

RXDDCN4C	DRUG CATEGORY NAME - CATEGORY 4, LEVEL 3
RXDICI1A	INGREDIENT CATEGORY ID - CATEGORY 1, LEVEL 1
RXDICI1B	INGREDIENT CATEGORY ID - CATEGORY 1, LEVEL 2
RXDICI1C	INGREDIENT CATEGORY ID - CATEGORY 1, LEVEL 3
RXDICI2A	INGREDIENT CATEGORY ID - CATEGORY 2, LEVEL 1
RXDICI2B	INGREDIENT CATEGORY ID - CATEGORY 2, LEVEL 2
RXDICI2C	INGREDIENT CATEGORY ID - CATEGORY 2, LEVEL 3
RXDICI3A	INGREDIENT CATEGORY ID - CATEGORY 3, LEVEL 1
RXDICI3B	INGREDIENT CATEGORY ID - CATEGORY 3, LEVEL 2
RXDICI3C	INGREDIENT CATEGORY ID - CATEGORY 3, LEVEL 3
RXDICI4A	INGREDIENT CATEGORY ID - CATEGORY 4, LEVEL 1
RXDICI4B	INGREDIENT CATEGORY ID - CATEGORY 4, LEVEL 2
RXDICI4C	INGREDIENT CATEGORY ID - CATEGORY 4, LEVEL 3
RXDICI5A	INGREDIENT CATEGORY ID - CATEGORY 5, LEVEL 1
RXDICI5B	INGREDIENT CATEGORY ID - CATEGORY 5, LEVEL 2
RXDICI5C	INGREDIENT CATEGORY ID - CATEGORY 5, LEVEL 3
RXDICI6A	INGREDIENT CATEGORY ID - CATEGORY 6, LEVEL 1
RXDICI6B	INGREDIENT CATEGORY ID - CATEGORY 6, LEVEL 2
RXDICI6C	INGREDIENT CATEGORY ID - CATEGORY 6, LEVEL 3
RXDICN1A	INGREDIENT CATEGORY NAME - CATEGORY 1, LEVEL 1
RXDICN1B	INGREDIENT CATEGORY NAME - CATEGORY 1, LEVEL 2
RXDICN1C	INGREDIENT CATEGORY NAME - CATEGORY 1, LEVEL 3
RXDICN2A	INGREDIENT CATEGORY NAME - CATEGORY 2, LEVEL 1
RXDICN2B	INGREDIENT CATEGORY NAME - CATEGORY 2, LEVEL 2
RXDICN2C	INGREDIENT CATEGORY NAME - CATEGORY 2, LEVEL 3
RXDICN3A	INGREDIENT CATEGORY NAME - CATEGORY 3, LEVEL 1
RXDICN3B	INGREDIENT CATEGORY NAME - CATEGORY 3, LEVEL 2
RXDICN3C	INGREDIENT CATEGORY NAME - CATEGORY 3, LEVEL 3
RXDICN4A	INGREDIENT CATEGORY NAME - CATEGORY 4, LEVEL 1
RXDICN4B	INGREDIENT CATEGORY NAME - CATEGORY 4, LEVEL 2
RXDICN4C	INGREDIENT CATEGORY NAME - CATEGORY 4, LEVEL 3
RXDICN5A	INGREDIENT CATEGORY NAME - CATEGORY 5, LEVEL 1
RXDICN5B	INGREDIENT CATEGORY NAME - CATEGORY 5, LEVEL 2
RXDICN5C	INGREDIENT CATEGORY NAME - CATEGORY 5, LEVEL 3
RXDICN6A	INGREDIENT CATEGORY NAME - CATEGORY 6, LEVEL 1
RXDICN6B	INGREDIENT CATEGORY NAME - CATEGORY 6, LEVEL 2
RXDICN6C	INGREDIENT CATEGORY NAME - CATEGORY 6, LEVEL 3

Analytic Notes

RXDCOUNT provides a count of all prescription products reported in the prescription medication section adjusting for products moved into or out of the final file. The count includes products reported as “refused” or “don’t know” by participants who reported they had taken a prescription medication but did not know the name of the medication or refused to

report the name of the medication. Drugs released as “unknown drug” are also included in the count. However, prescription supplements in the Dietary Supplements File are not included in the total count. Therefore, this variable does not provide a comprehensive count of all prescription products used by the survey participants

RXDDRUG and the variable RXD240B, which is found in the 99-00 and 01-02 Prescription Drug Files, both record the generic drug name of the reported product. However, since two different drug databases were used for editing across the different data release cycles, there are some differences in the why the drug names appear.

In some cases it may appear as though respondents reported the same prescription drug more than once. That is, the same generic ingredient name and product code may be listed more than once. There are a several reasons for these duplications. Respondents may have reported different brand name medications which had the same generic ingredient name (e.g., “Adalat” vs. “Procardia”), the medications may have been different forms or dosages of the same product, or the participant may have reported different lengths of use or reasons for use of the products. There were a few cases where the respondent did report the exact same drug more than once, with the same length of use, and reason for use. In these cases, since the interviewer recorded that a separate medication container was seen for each reported drug, both mentions of the drug were retained in the file.

During the data editing process, outlier values were examined. When there was insufficient information to conclude that values were invalid, they were left in the data set. Analysts should examine the distribution of the data and consider whether or not it is appropriate to include or exclude extreme values in a given analysis.

NCHS Locator Fields

Title: Prescription Medication (RXQ_RX_C)

Contact Number: 1-866-441-NCHS

Years of Content: 2003–2004

First Published: August 2007

Revised: NA

Access Constraints: None

Use Constraints: None

Geographic Coverage: None

Subject: The Prescription Medication subsection provides personal interview data on use of prescription medications during a one-month period prior to the survey date.

Record Source: NHANES 2003–2004

Survey Methodology: NHANES 2003–2004 is a stratified multistage probability sample of the civilian non-institutionalized population of the U.S.

Medium: NHANES Web site; SAS transport files.

**National Health and Nutrition Examination Survey
Codebook for Data Production (2003-2004)**

**Questionnaire Section:
Prescription Medication (RXQ_RX_C)**

August 2007



SEQN	Target
	B(0 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Respondent sequence number
English Text: Respondent sequence number.	
English Instructions:	

RXDUSE	Target
	B(0 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Taken prescription medicine, past month
English Text: In the past month have you used or taken medication for which a prescription is needed? Do not include prescription vitamins or minerals you may have already told me about.	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	12308	12308	
2	No	6072	18380	End of Section
7	Refused	5	18385	End of Section
9	Don't know	2	18387	End of Section
.	Missing	0	18387	

RXDDRUG	Target			
	B(0 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Generic drug name			
English Text: Generic drug name				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
Generic drug name	Value was recorded	12231	12231	
55555	Unknown	13	12244	
77777	Refused	11	12255	
99999	Don't know	53	12308	
< blank >	Missing	6079	18387	

RXDDRGID	Target			
	B(0 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Generic drug code			
English Text: Generic drug code				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
Generic drug code	Value was recorded	12231	12231	
< blank >	Missing	6156	18387	

RXQSEEN	Target			
	B(0 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Medicine container seen by interviewer			
English Text: Was prescription container seen by interviewer?				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	10832	10832	
2	No	1427	12259	
.	Missing	6128	18387	

RXDDAYS	Target			
	B(0 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Number of days taken medicine			
English Text: For how long have you been using or taking {PRODUCT NAME}?				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1 to 21900	Range of Values	11860	11860	
77777	Refused	1	11861	
99999	Don't know	174	12035	
.	Missing	6352	18387	

RXDCOUNT	Target			
	B(0 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Number of prescription medicines taken			
English Text: The number of prescription medicines reported				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1 to 20	Range of Values	12308	12308	
.	Missing	6079	18387	